

REMARKS

Claim 1 has been amended. Claims 24 and 25 have been newly added. Claims 1-25 are therefore pending.

Once again, Applicant acknowledges and appreciates the indication by the Examiner of allowable claims 3 and 13-23.

Support for the “planar” feature in amended claim 1 and in newly added claims 24 and 25 can be found, for example, on page 4, lines 20-21 of the specification.

Amended claim 1 is directed to a display scanner for reading a barcode comprising: an optical panel including a plurality of stacked parallel optical waveguides defining an inlet face at one end and a screen at an opposite end, wherein each of the waveguides has a core laminated between cladding, and wherein the waveguides are planar; a projector optically aligned with the inlet face for projecting a scan beam of light into the panel for transmission from the screen as a scan line to scan the barcode; a light sensor disposed in optical communication with the inlet face for detecting a return beam reflected from the barcode into the screen; and a decoder operatively joined with the sensor for decoding the return beam detected by the sensor to read the barcode.

In paragraph 3 of the Office Action mailed July 16, 2003, the Examiner rejected previous claim 1 under 35 U.S.C. § 103(a) over Eastman et al (U.S. Patent No. 5,786,585) in view of Schmutz et al (U.S. Patent No. 5,633,487). However, none of the features underlined in the paragraph above are shown or suggested by Eastman et al or Schmutz et al. In view of the absence of such teachings, it is respectfully submitted that the invention of amended claim 1 is neither shown nor suggested by the cited prior art. For example, the Examiner relied on Schmutz et al to teach that it would have been obvious to... “employ well-known optical wave-guide to the teachings of Eastman in order to efficiently transmit light from the source to remote locations

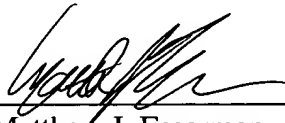
and return light from remote locations to the sensors.” The Examiner further states that “wave-guide helps preventing light from refracting, and thus light in low intensity will still register via wave-guide”. However, Applicant respectfully submits the limitations of claim 1, as now amended, are not disclosed nor taught by Schmutz et al. In particular, amended claim 1 now requires the waveguides to be planar as well as stacked and parallel. In contrast, Schmutz et al’s waveguides are optical fibers which are cylindrically shaped, i.e. they have a circular cross-section (see the illustration of optical fibers 51 in Fig. 2). Schmutz et al’s cylindrical optical fiber waveguides are clearly not planar as per amended claim 1. Cylindrical waveguides such as those disclosed in Schmutz et al restrict expansion of light within the waveguide in two dimensions (e.g. horizontal and vertical directions). Whereas, in significant contrast, the planar waveguides of the present invention restrict expansion of light in only 1 dimension (e.g. vertical direction), while allowing the light to expand in the other (e.g. horizontal) direction. Therefore Schmutz et al’s waveguide configuration is functionally significantly different to the waveguide configuration of the present invention as now claimed in amended claim 1. Since Schmutz et al and Eastman et al lack a teaching of these claimed features, Applicant respectfully submits the cited prior art, either alone or in combination, fails to teach the present invention as now claimed. As such, withdrawal of this rejection is respectfully requested.

Moreover, on page 3, lines 1-4 of the Office Action, the Examiner alleges “Schmutz teaches a barcode reader (see abstract) with wedge-shaped wave-guides 48 (col. 1, lines 49+; col. 4, lines 62+) as recited in claim 7. As shown in figure 3 (col. 4, lines 62+), the waveguides are produced by parallelly tacking [sic] layers of substrates with constant spacing between the layers.” However, Applicant submits Schmutz et al’s waveguides are not produced by parallel stacking layers of substrate. The “substrate” mentioned on col. 4, lines 64-65 is not the cylindrical fibers but rather the material where the cylindrical fibers reside. The substrate therefore is not being stacked as Examiner has alleged.

Since the cited prior art lack a teaching of the above claimed features, Applicant respectfully submits the cited prior art, either alone or in combination, fails to teach the present invention as claimed. As such, withdrawal of this rejection is respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that pending independent claims 1, 3, and 13 are in condition for allowance. In addition, it is respectfully submitted that the remaining claims are allowable, because such claims depend from an allowable base claim. Reconsideration and further examination of the present application is therefore requested, and a notice of allowance is earnestly solicited.

Respectfully submitted,



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